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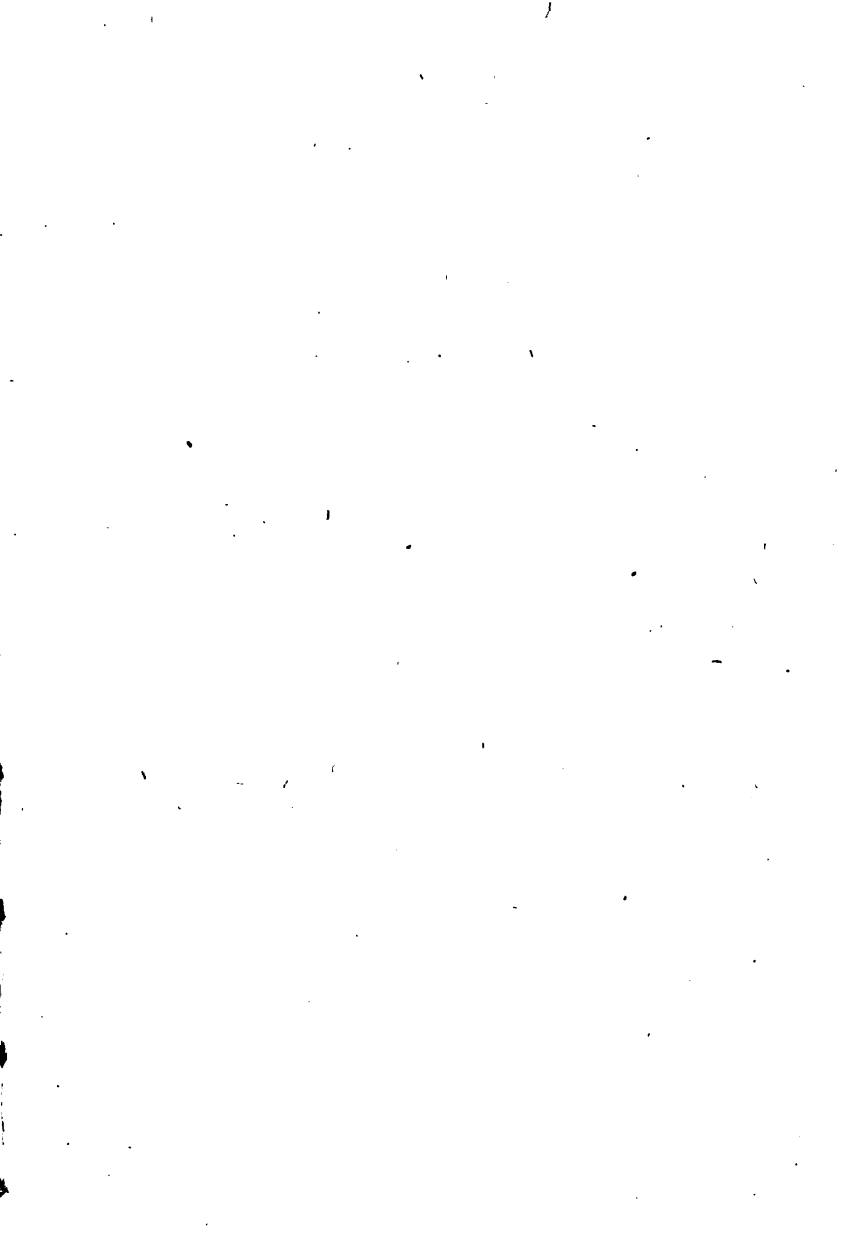
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MOTHERHOOD

CHILDREN WELL AND HAPPY

A MANUAL FOR
THE GIRLS' HEALTH LEAGUE

BY 
MAY BLISS DICKINSON, R.N.

PUBLISHED UNDER THE AUSPICES OF THE
MASSACHUSETTS STATE FEDERATION
OF WOMEN'S CLUBS

SECOND EDITION

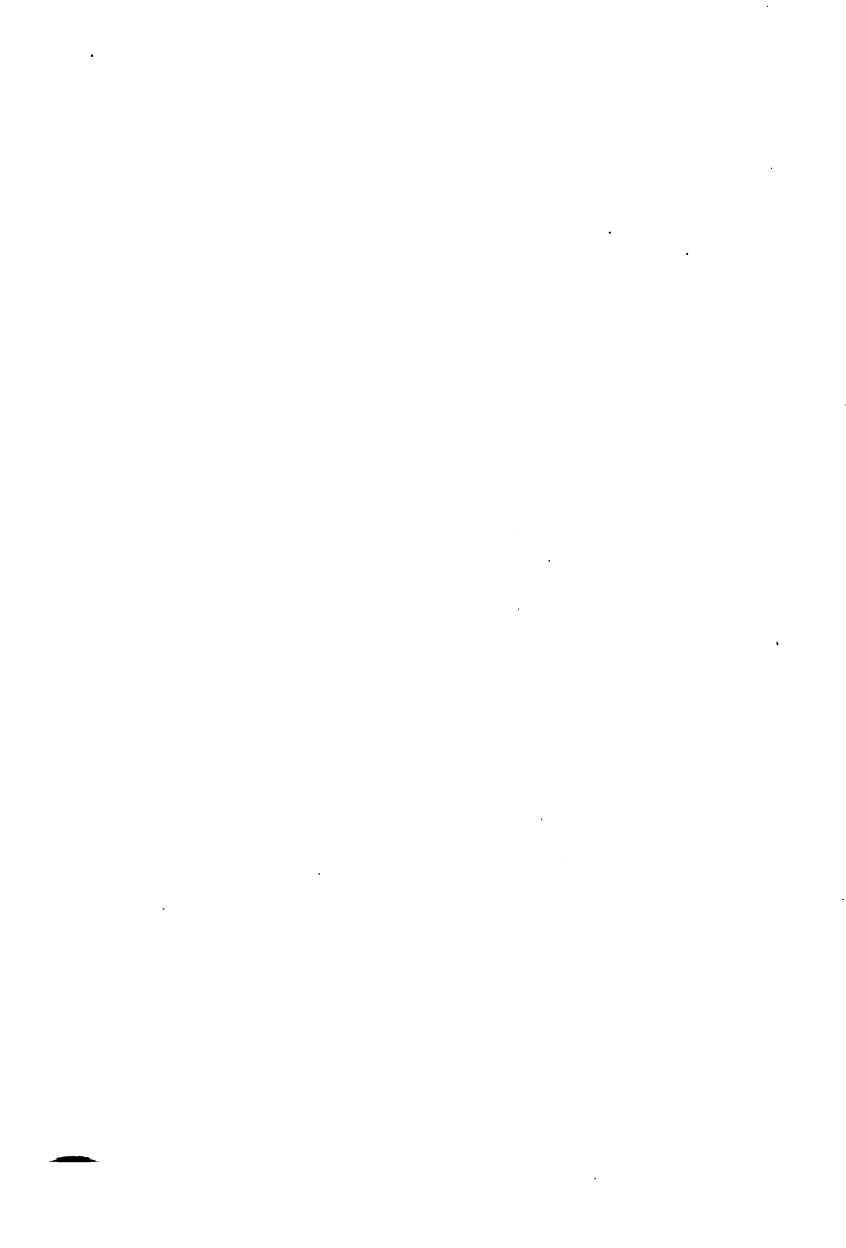
LEROY PHILLIPS
BOSTON

160
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TO
MY MOTHER
MALAH BLISS DICKINSON

"Earth's noblest thing, a woman perfected"



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INTRODUCTION

The purpose of this book is to give schoolgirls definite help in learning how to keep themselves and other children well and happy.

The problem is a double one: How can we best safeguard the health of our schoolgirls? and What can we do through them to save the babies? To the first question the answer is that we can teach the girls the sacredness of life by instructing them in personal hygiene and in the care of the home. The object of such instruction is to give each girl a "sound mind in a sound body" and to fit her for a woman's work in the world. The solution of the second part of the problem is to be found in the careful training of the schoolgirl in the general principles of hygiene as applied to babies.

Because the Health League classes reach the girls during their formative years, they offer a splendid opportunity to establish those habits of life that make for health and consequent happiness and usefulness. Now as never before we are coming to realize that the strength of a nation depends primarily on the spiritual and physical health of its citizens and also on the training of its children to assume in later years their duties as fathers and mothers.

The author wishes to express her appreciation and gratitude to the many persons who have manifested interest in the work of the Girls' Health League, which was launched under the auspices of the Massachusetts State Federation of Women's Clubs. She wishes also especially to thank the following: Mrs. Herbert J. Gurney, President of the Massachusetts State Federation of Women's Clubs, for

her encouragement; Dr. Payson Smith, Commissioner of Education of Massachusetts, for his indorsement; John B. Hawes, 2d, M.D., for his criticism and advice; Margaret V. Grogan, M.D., for her medical assistance; Miss Florence Hilton, Director of Physical Education, Framingham public schools, for illustrations of posture; G. W. Cokell of Framingham for photographic work of unusual value; the Tri-Ad Studio artists for their excellent designs.

MAY BLISS DICKINSON, R.N.

FOREWORD

May this little book go forth bearing words of healing, health, and joy to you who faithfully study them, and, also, to those little ones whom the kind Father may place in your arms in the wonderful years to come.

MRS. SAMUEL W. McCALL

,

CHILDREN
WELL AND HAPPY

CHAPTER I

PERSONAL HYGIENE

Suggestions for demonstrations. 1. Demonstrate the correct posture when standing, walking, and sitting. 2. Show the right and wrong kinds of shoes. 3. Demonstrate the correct way of carrying schoolbooks. 4. Show samples of soap—pure castile, Ivory, and a cheap scented variety—and explain the right and wrong uses of soap.

Personal hygiene may be defined as the wise and systematic care of the body. The reasons why every girl should take care of her body are:

First, good health means power to do one's work in life well.

Second, health is an aid to happiness and personal attractiveness.



CORRECT POSTURE WHEN
STANDING

Good health helps to give a person an active, cheerful mind, and this makes one alert, capable, and able to work to the best advantage. Good health gives poise and grace to the body and helps to create efficiency.

The following are good rules:

1. Form health-giving habits.
2. Let keeping well and happy be one of your most important duties.

The person who honestly wishes to be useful must begin at once to make good health a certainty.

RULES FOR CORRECT POSTURE

Standing. We should stand correctly in order that the organs of the body — heart, lungs, stomach, liver, and kidneys — may have room and be in position to do their work well. We should stand erect, chin in, chest high, abdomen flat, and with the weight of the body resting on the balls of the feet.

Walking. In walking the weight of the body should be thrown well forward.

It is correct to let the heel touch the ground first, but the weight should very quickly be transferred to the ball of the foot. The correct position of the feet is with the toes pointed straight forward. This straight-foot position is characteristic of our best athletes, our native Indians, and others who are noted for great endurance in running and walking. Two things are essential: stockings should be a little

longer than the feet, and shoes should be roomy at the toes and have heels not more than one inch high.

Sitting. As our schoolgirls sit many hours each day, it is vital to their health that they sit correctly. When sitting, one should push back in the chair as far as possible. In the resting position the entire trunk should lean backwards against the back of the chair; the hips should not be allowed to slide forward in the seat. In the active position the trunk is held erect or inclined forward. When leaning forward in a sitting position, the trunk must be held erect or inclined forward, and the bending should be from the hips, not from the waistline. Girls should not sit on one foot nor with the knees crossed, as these positions interfere with the circulation. When a person is sitting, the feet may be crossed if a change of position is desired.



**WRONG WAY TO CARRY
SCHOOLBOOKS**

**RIGHT WAY TO CARRY
SCHOOLBOOKS**

Carrying of schoolbooks. In going to and from school, books should be carried on the right arm one day, on the left arm the next day, or they may be divided and carried partly on each arm. Of course

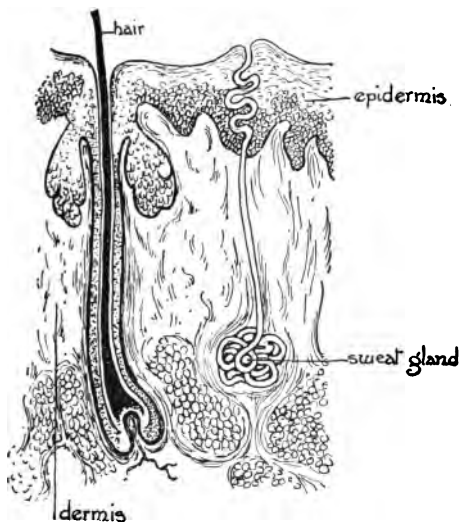
the best plan is not to carry many books home. All pupils should prepare as many lessons during the study periods of each school day as classes will permit.

Position when reading. Children should be taught at an early age not to let the light, either natural or artificial, shine in their eyes. The strongest light should come from the left. Light from above is the best. One should not read too long at any one time without looking up at some distant object in order to rest the muscles of the eyes.

CARE OF THE SKIN

The skin is the outer covering of the body. It serves as a protection to the body and as an organ of excretion. Many waste products which would act as poisons if retained in the body are carried away through the pores of the skin by means of perspiration. This perspiration is produced

by sweat-producing glands. Closely related to these are the oil-producing glands. The constant presence of perspiration and oily



SECTION OF THE SKIN

material from the glands makes it important that the skin be kept clean so that the pores may not become clogged.

Handkerchiefs. It is important that the child be supplied with clean handkerchiefs

and be taught the proper use of them. A child should be told never to use a handkerchief belonging to anyone else. A handkerchief should be held before the nose or mouth when coughing or sneezing. One should never spit on the sidewalk, in the house, or in any public place.

BATHS

Cleansing bath. The most important bath is the cleansing bath of warm water and soap, which should be taken at night or after exercise. After taking this bath one should dash or rub cold water over the skin. The body should be quickly dried and given a brisk rubbing with a coarse towel to increase the circulation.

Cold bath. A cool sponge bath, taken the first thing in the morning, has a stimulating effect on the body. It sends the blood to the skin and quickens the circulation. This bath should be followed

by a brisk rubdown with a rough towel. A cold plunge bath should not be taken without the advice of a physician, as cold baths are not beneficial to everyone.

Brushing the teeth. The greatest factor in preventing decay of the teeth is cleanliness. The teeth should be brushed the



THE CORRECT KIND OF TOOTHBRUSH

first thing in the morning and the last thing at night, and, when convenient, should be rinsed after eating. The lower teeth should be brushed with a half-rotary motion up, and the upper teeth should be brushed down. This will assist in removing particles of food from the teeth and will prevent injury to the gums. Dental floss should be used between the teeth. Coarse food which requires much chewing

strengthens the teeth and is excellent for the digestion.

It is well to use a simple mouth wash of one-half teaspoonful of soda or salt in a glass of tepid water. Have the dentist clean the teeth twice a year; do not wait until the teeth ache before going to the dentist.

FOOD

Food is that which supplies nourishment to our bodies. Although many elements enter into the composition of what we eat, food is roughly divided into three classes: proteids, carbohydrates, and fats. Some foods contain all of these elements; others contain only one or two of them.

Proteids. The proteids build and repair the tissues of the body and include such substances as the lean of meat and fish, the white of egg, milk, and parts of vegetables. Dried peas, dried beans, and nuts contain large percentages of proteid.

Carbohydrates (sugars and starches). Carbohydrates form the essential parts of vegetables and furnish body heat and muscular power. Foods containing a large percentage of starch are bread, potatoes, rice, macaroni, tapioca, and cereals. Such foods as candy, maple sirup, honey, and molasses are almost entirely sugar; while carrots, parsnips, and beets contain a large percentage of sugar.

Fats. Fats are the energy-producing part of our diet. They may be of either vegetable or animal origin—as cream, butter, yolks of eggs, nuts, meat, and fish fats.

Mixed diet. A mixed diet consisting of all the food elements in proper proportion is necessary to supply material for the normal growth of the body. Everyone should eat vegetables freely not only because they are good for the bowels (acting as a wholesome laxative) but also because

many of them, especially the green vegetables, contain important organic matter, such as iron.

Bread and butter. Bread has often been called the staff of life. In other words, bread and butter alone form an almost perfectly balanced meal. Bread should never be eaten until it is at least twenty-four hours old. Stale bread cut thin and toasted in the oven until it is crisp is appetizing and wholesome. Instead of giving large amounts of bread and butter to children three times a day, mothers should substitute in part vegetables and fruits.

Coarse foods. Coarse foods are especially valuable because they require thorough mastication, which is the real function of the teeth. This helps to keep the tongue and teeth clean. Another reason for giving coarse foods to children is that the circulation of blood in the gums and throat is improved by chewing.

Milk. Milk contains all the essential elements of a well-balanced diet and is one of the most important foods. It should be taken slowly and with other food, such as graham crackers, and should constitute an important part of the diet of every child. Children up to fourteen years of age should take milk, or milk flavored with cocoa, in the place of tea and coffee.

Water. While water is not classed as a food, it makes up three fifths of the total of the fluids of the body and aids in the elimination of the waste products of the body. All foods contain some water, while fruits and vegetables are largely composed of it. A glass of water should be taken before breakfast, in the middle of the morning, and in the afternoon, and two glasses in the evening. One glass may be taken with the meals if it is taken after the food in the mouth has been swallowed.

Six or eight glasses of water should be taken during every twenty-four hours.

Candy. Many people believe that candy is harmful. This is because children, and indeed adults, are apt to eat it at the wrong time and to eat too much of it at one time; nevertheless it has high food value, and a little pure candy eaten once a day, after a meal, is healthful.

Bowels. When there is any trouble with the stomach or bowels look for the cause in some mistake or indiscretion in the diet. The family physician should be consulted.

Care of the bowels. The bowels should move at least once every day. A regular habit of bowel movement can and should be formed. The best time is in the morning, after breakfast. Many of the headaches, muddy, pimply complexions, and bad tempers are due to constipation. This condition may be relieved by exercise, by

the eating of coarse food, vegetables, fruits, such as apples, prunes, and oranges, and by drinking plenty of water.

Exercise. Exercise, as either work or play, is necessary because it stimulates the action of all the organs of the body. The blood circulates more freely during exercise, and more waste products are thrown off. One should not take violent exercise immediately after eating; neither should one exercise when unduly fatigued. Work must be wisely alternated with play and rest, because efficiency ends when a person becomes overtired.

CHAPTER II

HOME SANITATION

Suggestions for demonstrations. 1. Demonstrate the ventilation of a room. 2. Demonstrate the dusting of a room.

By home sanitation we mean keeping the house clean and giving the forces of nature, such as sunshine, fresh air, and pure water, their fullest opportunity to work for us. By letting the out of doors indoors we give nature a fairer chance at her great task of keeping us well and happy.

The house is a protection for the family and should have healthful and cheerful surroundings. The housewife should understand the principles of home sanitation and thereby secure for her family a healthy and happy life.

Location of the house. The location of the house is often decided more by necessity or convenience than by the consideration of health. If possible, a tenement or house should be so situated as to secure good air, sunshine, good drainage, and good neighbors. A house with a southerly exposure or placed with its corners to the points of the compass has a distinct hygienic value and is always to be preferred, because it gets the sun in each room at some time during the day.

Sunshine. Abundant sunshine and light in the home are of great importance, and help to make the home healthful and more cheerful. People living in rooms which have no sun become pale and gradually lose strength.

Pure air. Sunshine and pure air are the most important essentials for healthy life in the home. Nothing will take the place of fresh air. Everyone should be taught

to fill the lungs with it by slow, deep breathing. We breathe on an average eighteen times a minute, or 25,920 times every twenty-four hours. No matter how well rooms are ventilated, it is a good plan to open the windows wide a few times each day. This helps to rid the atmosphere of impurities.

Oxygen. Oxygen is the element in the air that sustains life; it is inhaled through the lungs, taken up by the blood, and carried to all parts of the body.

Carbon dioxide. The air also contains carbon dioxide, which is a product of combustion in many forms, such as respiration and the decomposition of animal and vegetable matter. Although enormous quantities of carbon dioxide are constantly being forced into the air, it is likewise being removed constantly—especially by growing vegetation. Plants and trees, under the influence of sunlight, absorb much of

the carbon dioxide ; therefore plants, which many people like to have in their rooms, not only please the eye but have a practical value.

The condition of plants in the house is a good test of home sanitation. If the leaves drop off, probably the rooms are overheated and the air too dry. There is some truth in the saying, "Where plants will not grow, people ought not to live." The breathing of impure air causes a feeling of discomfort ; the habitual breathing of bad air causes headache and lessens the resistance of the body to disease.

Impurities of air in homes. Many conditions may help cause bad air in our homes ; among these are mentioned overcrowding, oil stoves, gas stoves, and the kind of housekeeping which permits the accumulation of dust and waste.

Good ventilation. By good ventilation we mean a sufficient supply of fresh air of

suitable temperature and moisture, kept systematically in motion. Moving air



IDEAL VENTILATION

serves a double purpose — that of bringing to us a fresh supply and of taking away the warm, moist, impure air by which we

are surrounded. The best and simplest way to ventilate a room is to have one or two windows open at both the top and the bottom. During storms or in the winter time, ventilation may be secured by covering a wire screen with thin outing flannel. This allows the entrance of fresh air without drafts.

Drafts. There is a superstition that colds are caused by drafts. As a matter of fact, moving air is a necessity, and drafts do not cause colds. Drafts, sudden chilling of the body, and dampness may be predisposing causes, but in themselves they will not produce a cold. Such conditions lower the general vitality of the body and favor the development of infection when the specific cause is introduced.

Temperature of air. The temperature of the air has a very important bearing on health. The harmful effect of extremes of temperature has caused the death of

many babies. The temperature of heated rooms, during the day, should be between 68° and 70° F.

Humidity. By humidity we mean the moisture in the air. Many of the colds which occur in the winter are due to the dry air in homes and places of work. Extreme dryness irritates the mucous membranes of the nose and throat, and this irritation is favorable to the development of infection. Moisture may be added to the air in two simple ways: by keeping a dish of water on the radiator and by keeping plants in the rooms, for plants constantly throw off moisture.

Water. The purity of the water that is used in the household, whether it comes from a public water supply or from a well in the country, is a question of great importance. Every housewife should know the source from which the water used in her household comes.

Water is considered pure from the standpoint of health when it is free from pollution, color, odor, poisonous salts, and turbidity. Clear, sparkling water is not necessarily pure however. The purity of water can be determined only by analysis.

In most states the public water supply of cities and towns is inspected regularly and the water is examined, so that the people may be protected from danger of infection. When the water used in a household is obtained from a well or private water supply, an analysis of it should be made.

All wells should be carefully constructed and covered, so that there may be no danger of pollution from surface drainage. Privy vaults should not be near the well or so located that there will be drainage from them to a well; otherwise the germs of typhoid and other diseases may find their way to it through the

ground and become a source of danger to the persons using the water. As an extra precaution all discharges from persons who have tuberculosis, cholera, dysentery, or typhoid fever should be effectively disinfected before they are emptied into a privy vault or into a flush closet.

Purification of water. If the purity of the water is doubted, it should be boiled for five or ten minutes in a clean, covered kettle. This renders it safe. The flat taste which often results from the boiling may be remedied by shaking the water in a bottle or pouring it from one clean pitcher to another or by simply exposing it to the air overnight. Water should be kept cool, and should be protected from dust.

Household filters. The domestic filter is of little value. It will remove visible particles of matter, but will have very

little effect upon bacteria. If such filters are used, they should be carefully and intelligently cleaned several times a day.

Care and arrangement of rooms. All the rooms in the house should be well ventilated and kept scrupulously clean. The windows should be entirely screened in order that they may be opened at both top and bottom. The screens should be put on in the spring before the flies and mosquitoes appear and should not be removed until all danger from them is past. Screens should be brushed frequently.

Dust and dusting. Dust is brought into the home on shoes and clothing, and is blown in from the outside. Dust must be kept under control by the use of a vacuum cleaner, a carpet sweeper, or a damp broom, and by good ventilation. Children should not be allowed to remain in rooms that are being swept, for dust causes an irritation of the eyes, nose, and

throat and also is frequently a carrier of disease germs. The dusting of furniture should be done with a damp cloth. This will wipe off the dust and not stir it up into the air where it will be inhaled or will settle again. A feather duster should not be used. Dampened dusters may be prepared in the following way: spread the dusters out smoothly on a towel that has been wrung out of hot water, roll, and let them lie for half an hour before using.

The cellar. The cellar should extend under the entire house. If there is no cellar, the space under the floor should be well ventilated. There should be windows on at least two sides of the cellar to give ventilation and light, and the windows should be well screened. The cellar requires constant care and should be kept not only dry but clean and free from rubbish and substances that decay or absorb and hold moisture.

Care of food. Young people should learn to care for food in the home. Food should be fresh, clean, and wholesome. It should be protected from dust and handled only with clean hands. The development of bacteria may be prevented by keeping the food cold and clean. Fruits should be washed before being used. The outer covering of berries is easily bruised, and such fruits are frequently contaminated by dust and flies. Fruit should be full-grown but not over-ripe when eaten. Vegetables such as lettuce, celery, and radishes, that are eaten uncooked, should be thoroughly washed and rinsed in several waters.

Care of garbage. Garbage consists chiefly of the refuse matter from the kitchen. It should be kept in a clean metal can with a tight-fitting cover, since it will attract flies, rats, and other vermin. It is important that the can be frequently emptied

and cleaned. Be careful that broken glass, broken dishes, nails, tacks, or old papers are not mixed with the kitchen refuse. Have a separate can or barrel for ashes and all glass and metal rubbish. The fair criterion of good housekeeping is the amount of garbage. A large amount of garbage means carelessness and waste in the kitchen.

Dishcloth and dish towels. Beware of a greasy, damp, disease-carrying dishcloth that is hung in a warm, dark place. The dishcloth and dish towels should be kept clean by washing them with soap and hot water every day. They should be hung out in the sunshine in the open air.

• **Clean hands.** Clean hands mean more than personal cleanliness. They mean clean door knobs, furniture, and clothing. The hands should be washed frequently with warm water and soap, and always before handling food, after going to the toilet, and before taking the baby.

CHAPTER III

THE NEWBORN BABY

Suggestions for demonstrations. 1. Demonstrate the washing of the baby's eyes. 2. Demonstrate giving the baby the oil bath. 3. Demonstrate giving the sponge bath. 4. Show how to make the baby's bed and how to place the baby in it.

First care of baby. The hands should be carefully washed before handling the baby. When the baby comes his eyes must be washed with a two per cent solution of boric acid.¹ The proper care of the eyes at this time may be the means of preserving the eyesight. A fresh piece of cotton should be used for each eye. Always wash the lids from the nose toward the outer corner of the eye; then burn the cotton. The baby should then

¹ See Appendix B, p. 109.

be placed upon his right side, with his head a little lower than his body.

Oil bath. When the baby is born there is on his skin, particularly in the creases, a white cheeselike substance that can be removed only with oil. Therefore the baby's first bath should be of warm olive oil or vaseline, applied with a piece of soft cotton and allowed to remain for an hour or more and then very gently wiped off. A water bath should not be given until the second day.

A sponge bath. A sponge bath should be given daily up to the sixth or ninth day, after which the warm tub bath should be substituted. Essentials for the bath are :

1. A warm room (72° F.)
2. A bath thermometer
3. A large flannel bath apron
4. Two basins of warm water
5. Two soft washcloths
6. Two large soft towels

7. Olive-oil soap or pure castile soap
8. Pure talcum powder
9. Two per cent boric-acid solution
10. Absorbent cotton

The toilet articles should be kept on a white enamel tray, which is easy to clean. After everything is prepared for the bath the fresh clothing should be warmed. The mother puts on her apron and takes the baby in her lap; she then undresses him and wraps him in the bath apron. The temperature of the bath should be 100° F. by the thermometer, and this should never be guessed at, because the water feels very much warmer to the sensitive skin of the baby than to the hand of an adult. The head and face are first washed with the warm water and carefully dried. The body is then bathed with the warm water and soap, rinsed with clear water, wrapped in soft towels, and dried by patting. Great care must be taken to dry

thoroughly all the folds and creases of the skin. A little lanolin or sweet oil should then be gently rubbed into the folds or a little talcum powder may be dusted on the neck, behind the ears, under the arms and knees, in the groin, and on the buttocks. Wipe away all superfluous powder, as it is apt to get wet and cake, and will then irritate the skin.

For the tub bath see page 63.

Dressing the baby. In dressing and undressing the baby the garment should be put on and off over the feet. This will prevent dust or other foreign particles on the clothing from entering the eyes, nose, or mouth of the baby. After the baby is dressed his nose, ears, and eyes should be cleaned by means of twisted cotton dipped in a two per cent solution of boric acid. A fresh piece of cotton should be used for each eye, ear, and nostril and should then be burned.

DEVELOPMENT

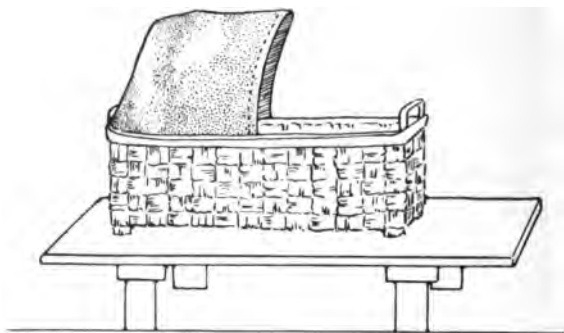
Crying. It is necessary for a newborn baby to cry a little every day; this tends to expand his lungs.

Sight. A newborn baby is not able to distinguish objects, but his eyes are very sensitive to light and must be carefully protected.

Hearing. The hearing soon becomes acute; therefore loud and sudden noises should be avoided, as they startle and excite the baby. It is well to keep him in a room away from noise and confusion.

Speech. When six or seven months old a baby begins to try to utter words and will usually be able to say a few words when nine or ten months old. The average child, however, does not begin to form sentences of more than two or three words until he is about eighteen months or two years of age.

Baby's bed. The newborn baby sleeps about nine tenths of the time. He should have a bed by himself. The first bed may be made in an ordinary clothes basket or in a light box. Table padding makes a



THE BABY'S BED

good mattress if folded to six thicknesses, because it is easily laundered and is inexpensive. When washed it should be dried out of doors in the sunshine. If the material used in the crib mattress is excelsior, it should be made as smooth as possible, with a soft pad placed on top of it. Curled

hair is more expensive, but is light, cool, and easily cleansed. The crib mattress should always be protected by a piece of rubber sheeting covered with a soft pad. The baby's bed should be raised at least twelve inches from the floor to escape drafts.

Pillows. The baby's head should not be elevated, as he will take more air into his lungs when no pillow is used. If the mother wishes, she may place a folded soft cloth under the baby's head.

Birth registration. See that the baby's birth is promptly and accurately registered. Later he may need his birth certificate to prove his

1. Identity
2. Legitimacy
3. Right to inherit property
4. Right to enter school
5. Right to seek employment
6. Right to vote
7. Right to hold office
8. Privilege to travel in other countries

Registry Department

CITY OF -----

County of -----, State of -----

CITY HALL

The following is an abstract from the RECORD
OF BIRTHS in said City:

No.-----

----- { SON } of
----- { DAU. }

was born in-----

I hereby certify that the above is a true copy
from the RECORD OF BIRTHS in the Custody of the
City Registrar.

CITY
SEAL

City Registrar

MODEL BIRTH CERTIFICATE .

Protection against flies and mosquitoes.
The baby must be protected from flies
and mosquitoes because malaria and other

diseases may be transmitted in this way. Flies are carriers of filth and disease germs and therefore should never be allowed to touch the baby's lips or the baby's bottle.

It is important that netting be placed over the baby's bed and be large enough to tuck in under the mattress. It should not hang down over the sides of the bed.

CHAPTER IV

BREAST FEEDING

Suggestions for demonstrations. 1. Demonstrate how to hold the baby when feeding him. 2. Demonstrate how to weigh the baby.

Every mother should nurse her baby if she is well and has the milk; it is her most important duty for the time being, and all other things should be secondary to it.

The reasons. Breast milk is nature's food for the baby. It is fresh, sterile, and always at hand. It is the least expensive food that can be given, and contains the proper elements of food in the right proportions.

Breast-fed babies seldom have bowel troubles—which are apt to be so fatal in bottle-fed babies, especially in hot

weather. Ten bottle-fed babies die to one fed on the breast.

Hours for nursing. At the end of the first twenty-four hours the baby is put to the breast. Because of the scant quantity of milk in the breasts, every four or six hours is often enough for the first two days. Until the mother's milk comes no food should be given to the baby except a little cool boiled water, not sweetened. If the milk is very scanty, the physician will probably order a few bottle feedings. For a normal baby the following feedings are recommended:

FROM BIRTH TO THREE MONTHS OLD	FROM THREE TO EIGHT MONTHS OLD	FROM EIGHT MONTHS TO ONE YEAR OLD
6 A.M.	6 A.M.	6 A.M.
9 A.M.	9.30 A.M.	10 A.M.
12 noon	1 P.M.	2 P.M.
3 P.M.	4.30 P.M.	6 P.M.
6 P.M.	8 P.M.	10 P.M.
9 P.M.	12 midnight	
12 midnight		

The mother should nurse her baby regularly and give nothing between feedings except unsweetened boiled water. If the baby is awakened at feeding times during the day, he will soon form the habit of nursing regularly.

How to hold the baby. While the baby is nursing do not hold him too closely to the breast, as he must have plenty of air to breathe. If the baby is nursing from the right breast, he should be held on the right arm, and the mother's left hand should press the breast away from the baby's nose.

Length of nursing time. The baby should not nurse more than ten minutes at first nor more than twenty minutes at any time. He should not be allowed to fall asleep while nursing nor be permitted to take his meal too rapidly, as this latter may cause him to hiccup. If a baby nurses too rapidly, withdraw the nipple

from his mouth for a few seconds. This may be done every three or four minutes.

Baby's stomach. The infant generally takes more fluid at each feeding than the stomach can hold at one time. Almost as soon as the milk is swallowed it begins to pass into the intestines. Breast milk is digested and passed on more rapidly than cow's milk.

Mixed feedings. When the mother's milk is of good quality, but is not sufficient in quantity to satisfy the baby, it is necessary to give him additional food. This is done by giving alternate feedings of the breast milk and modified milk. Mixed feedings should always be given under the doctor's directions. Every bit of breast milk helps the baby, because it tends to make the digestion of artificial food easier.

Advice to nursing mothers. Keep yourself well. As long as you are well the

baby will keep well. Even though you have but little milk at first, do not get discouraged; be patient and persevering. You should have lunches of milk and gruel—one in the middle of the morning, one in the afternoon, and another at bedtime. Remember that an active, cheerful mind is an important factor in good health. Nothing upsets a baby more quickly than a nervous, irritable mother.

Diet of a nursing woman. The meals should be simple and nutritious and should include a large amount of liquid. Milk, cereals, eggs, and soups should form the principal part of the diet. Some of the foods to be avoided by a nursing woman are cabbage, onions, garlic, and sour fruits.

Weaning. The healthy baby should be weaned from the breast between the ninth and the eleventh month. Every baby ought to be weaned entirely at the age of one year, but it is better not to

wean him during the summer. If a baby has been taught to take water from a spoon or cup, there will be no trouble at the weaning period in having him take his milk from a cup. Weaning should take place gradually. During the process the mother should take less liquids and usually some laxative to produce free movements of the bowels.

Weigh the baby. The baby should be weighed once a week. Scales similar to grocers' scales, with a basket attached, may be used, as they are more accurate than spring scales.

Directions for weighing. Have the scales in a warm place, protected from drafts. Undress the baby, wrap him in a small blanket, and place him in the basket on the scales. Write down the total weight; then lift the baby out, weigh the basket and blanket together, and subtract this amount from the first weight. The

average healthy baby weighs from seven to seven and one-half pounds at birth, and his average length is twenty inches.



WEIGHING THE BABY

A healthy baby usually doubles his weight at the end of the fifth month, and by the end of the first year weighs three times as much as at birth. For instance, if he weighs seven pounds at birth, he

should weigh fourteen pounds at the end of the fifth month and twenty-one pounds at the end of the first year.

If the length is twenty inches at birth, the baby should grow about four inches during the first five months and eight inches during the first year. The following table shows the actual gain in weight of a healthy baby that was breast fed:

Weight at birth	7½ pounds
Weight at age of two months . .	11¼ pounds
Weight at age of four months . .	16 pounds
Weight at age of six months . .	18 pounds
Weight at age of eight months . .	20 pounds
Weight at end of first year . . .	21 pounds

A child may be in good health and yet not conform to these averages. This need cause no uneasiness, providing the child is well and gains in weight.

CHAPTER V

BOTTLE FEEDING

Suggestions for demonstrations. 1. Show and demonstrate the care of utensils to be used in modifying milk. 2. Demonstrate the process of modifying milk. 3. Demonstrate the process of pasteurizing milk.

Foods. Condensed milk and proprietary foods should be used only in emergency or on the advice of a physician. They are of value only in the rare instances when a baby cannot digest cow's milk or when prescribed by a physician.

Cow's milk. If a baby cannot have breast milk, the next best food is properly modified cow's milk. Cow's milk, when used for the baby, must be fresh. It should be delivered in sealed bottles. Milk sold from open cans should never

be given to a child. Milk should not be left standing on the doorstep nor in a warm kitchen, but should be placed in the ice box as soon as received, where it should be kept covered and at a temperature between 35° and 45° F.

Choice of milk. Whenever possible, certified milk should be used. *Certified milk* is milk produced under conditions that conform to certain standards of cleanliness laid down by the state. Uncertified milk may of course often be used without danger, but if there is any question about its purity, it should be pasteurized (see page 52 for directions for pasteurizing).

COMPARISON OF MOTHER'S MILK AND
COW'S MILK

	MOTHER'S MILK	Cow's MILK
Fat	3.50 per cent	4.00 per cent
Sugar . . .	7.00 per cent	4.50 per cent
Protein . . .	1.25 per cent	3.50 per cent
Salts	.20 per cent	.70 per cent

No matter how cow's milk is modified, it differs from human milk in certain other ways that we do not understand, and this renders it less desirable for infant feeding than human milk.

Modified milk. The formula for the baby's food must be given by a nurse or a physician. The following general directions for feeding a baby that does not require a special formula have been prepared by a committee of the American Medical Association:

Beginning on the third day the average baby should be given three ounces of milk daily, diluted with seven ounces of water. To this should be added one tablespoon of limewater and two level teaspoons of sugar. This should be given in seven feedings.

At one week the average child requires five ounces of milk daily, which should be diluted with ten ounces of water. To this should be added one and one-half even teaspoons of sugar and one ounce of limewater. This should be



MODIFICATION OF THE MILK

given in seven feedings. The milk should be increased by one-half ounce about every four days. The water should be increased by one-half ounce every eight days.

At three months the average child requires sixteen ounces of milk daily, which should be diluted with sixteen ounces of water. To this should be added three tablespoons of sugar and two ounces of limewater. This should be given in six feedings. The milk should be increased by one-half ounce every six days. The water should be reduced by one-half ounce about every two weeks.

At six months the average child requires twenty-four ounces of milk daily, which should be diluted with twelve ounces of water. To this should be added two ounces of limewater and three even tablespoons of sugar. This should be given in five feedings. The amount of milk should be increased by one-half ounce every week. The milk should be increased only if the child is hungry and digesting his food well. It should not be increased unless he is hungry, nor if he is suffering from indigestion, even though he seems hungry.

At nine months the average child requires thirty ounces of milk daily, which should be diluted with ten ounces of water. To this should be added two even tablespoons of sugar and two

ounces of limewater. This should be given in five feedings. The sugar added may be milk sugar or, if this cannot be obtained, cane (granulated) sugar or maltose (malt sugar). At first plain water should be used to dilute the milk.

At three months, sometimes earlier, a weak barley water may be used in the place of plain water; it is made of one-half level tablespoon of barley flour to sixteen ounces of water and cooked for twenty minutes. (See Appendix B.)

Fill the feeding bottles, cork them, and put on the ice. If the milk is not certified, it should be pasteurized.

Utensils. The utensils used for preparing the baby's food should be reserved exclusively for that purpose. The best material for these utensils is enamel or agateware.

LIST OF UTENSILS

1. A big covered kettle or dish pan. This should measure at least eighteen inches in diameter, so that all other utensils may be boiled in it at one time.

2. Bottles. There should be as many bottles as there are feedings in one day.

3. Nipples. It is important to select those that can be turned wrong side out to be cleaned.

4. A bottle brush.

5. A nipple brush.

6. A sixteen-ounce graduated measuring glass.

7. A tablespoon, teaspoon, and cream dipper.

8. A teapot of enamel or agateware in which sterile water is kept for use as needed.

9. A wire rack for holding bottles.

10. A roll of nonabsorbent cotton for the stoppers for the feeding bottles.

Pasteurizing. This process consists of heating the milk to 145° F. and keeping it at this temperature for thirty minutes. The following method may be used: Fill the bottles with the modified milk and place in the wire rack. Put the rack in a dish of water, with the water just above the level of the milk. Suspend a milk thermometer in the water and heat until the thermometer registers 145° F. Keep

at this temperature for thirty minutes, then take out the rack and cork the bottles at once. Place carefully in a dish of cool water or put an inverted basin over



PASTEURIZING THE BABY'S MILK

the rack containing the bottles and set under the cold-water faucet. Cool quickly and place on the ice at once.

If no pasteurizing outfit is at hand, the bottles of milk may be heated in a double boiler until the steam arises. Continue

heating at this temperature for fifteen minutes. If the pasteurized milk is used for a long time, it is well to give the baby orange juice to prevent rickets and scurvy. This should be given in the morning, regularly, three quarters of an hour before feeding time. One teaspoonful should be given at first, and the amount gradually increased up to one tablespoonful.

CHAPTER VI

CARE OF THE BABY'S FOOD

Suggestions for demonstrations. 1. Show a homemade refrigerator. 2. Demonstrate the care of bottles. 3. Demonstrate the care of rubber nipples. 4. Demonstrate the process of sterilizing water.

Homemade refrigerator. An ice box to keep the baby's milk in good condition may be made in the following way at very little cost: In a wooden box about eighteen inches square and of about the same depth, put a layer of sawdust three inches deep. Then put a ten-quart pail (or a larger one) in the center of the box. Add more sawdust and put a cardboard collar around the pail, to keep the sawdust in place. It is also well to put a layer of cheesecloth over the sawdust.

Inside this pail place another (smaller) one, to hold the ice. The bottles are put in the larger pail, which should be securely covered, and a bag of sawdust is placed over it. The box should be tightly closed by a wooden cover lined with several



HOMEMADE REFRIGERATOR

thicknesses of newspaper. The inner pail should be taken out and cleaned every morning.

The box described above will keep cold for twenty-four hours with five cents' worth of ice in it. The cover should not be left off any longer than is necessary to remove the bottles.



FILLING THE BABY'S BOTTLES

Care of bottles. New bottles should be placed in a kettle of cold water, put on the stove, and boiled for twenty minutes.

They should then be removed from the stove, but left in the kettle until the water cools. Bottles treated in this way will not break easily.

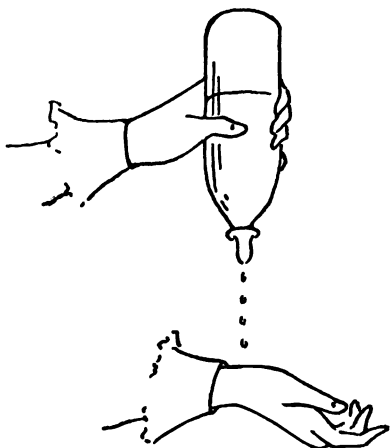
As soon as the baby has finished feeding, the bottles should be rinsed with cold water, cleaned with a bottle brush in clear hot water, then filled with fresh water and set aside. In the morning, before the day's food is prepared, all bottles should be scrubbed with hot water and Ivory soap; they should then be rinsed thoroughly in several waters, boiled in a solution consisting of two teaspoonfuls of soda to one quart of water, and rinsed in clear boiled water.

Care of bottle nipples. New nipples should always be scrubbed and boiled for three minutes before being used. It is better to buy nipples that can be turned inside out. There should always be at least two nipples clean and ready for use.

Immediately after the feeding the nipple should be removed from the bottle, washed in cold water, scrubbed inside and outside, rinsed well, and placed in a jar of sterile water or a two per cent solution of boric acid. Nipples should be boiled daily for about three minutes.

When it is time to feed the baby the bottle should be taken from the ice box and placed (still corked) in a dish of water deep enough to come above the milk line. The water is to be heated until the milk is warmed. The water should not boil, as that renders the milk less easy to digest and is apt to make the baby constipated. A clean cloth should be placed in the bottom of the dish or kettle, to prevent the bottle from slipping and breaking. The temperature of the milk should be tested by dropping some of it on the inner surface of the arm. If it feels warm to the skin, it is the correct temperature for the baby.

The mother should never put the nipple into her own mouth to test the temperature. The nipple should be handled only



TESTING THE TEMPERATURE OF THE MILK

by the neck; the part that goes into the baby's mouth should never be touched.

Holding the baby while feeding. The baby should be held by the mother or nurse in the same position as for breast feeding. The bottle should be held so



CORRECT WAY TO HOLD THE BABY WHILE FEEDING

that the neck is continually filled, in order that the baby may not suck in air. The feeding should be finished in twenty minutes. If the baby nurses too rapidly,

withdraw the nipple for a moment several times during the feeding. If the baby falls asleep, the bottle should be removed, and no more milk should be given until the next feeding time; he should not be permitted to nurse a little and then sleep a little, and thus unduly prolong the feeding.

Sterile water to drink. The water which is given the baby to drink should first be boiled and then put where it will cool. Before it is given it should be slightly warmed.

CHAPTER VII

CARE OF THE BABY'S BODY

Suggestions for demonstrations. 1. Demonstrate the preparation of a two per cent solution of boric acid. 2. Demonstrate giving the baby a tub bath. 3. Demonstrate giving the baby a bran bath. 4. Demonstrate protecting the baby from drafts.

Preparation for the bath. A tub bath may be given to the baby as early as the sixth or ninth day. The morning bath should be given three quarters of an hour before the nine o'clock feeding. The mother should wash her hands carefully before handling the baby. The temperature of the room in which the bath is given should not be below 72° F. If the room is too hot—so hot that the baby perspires—there is grave danger of his being chilled when the bath is over.

The tub should never be put on the floor, but always on a chair or low table.



BATHING THE BABY

This makes it easier for the mother to give the bath and also helps protect the baby from dust and drafts. Screens should be used to secure complete protection

from drafts. For the first four weeks the temperature of the water should be between 98° and 100° F. As the baby grows older the temperature should be gradually lowered. Suitable temperatures are

- 100° F. at birth
- 98° F. at one month
- 95° F. at three months
- 90° F. at six months
- 85° F. at twelve months

If the baby is bluish and does not react well, it means that the water was not the right temperature or that he was in the water too long. Always use a bath thermometer; never guess at the temperature.

After everything is prepared for the bath and the clean clothing warmed, undress the baby. He should be weighed once a week, at this time.

The bath. He should then be wrapped in a warm blanket and held in the lap while his eyes, ears, nose, face, and head are washed.

The nose and the ears. The inside of the baby's nose should be carefully cleaned every day with a soft, wet twist of absorbent cotton. The external ears should be washed daily. No attempt should be made to clean the inside of the ears except with a piece of cotton wound around the end of the little finger.

The eyes. The eyes should be cleaned each morning, at first with a two per cent solution of boric acid, and after two months with warm sterile water. A separate piece of cotton should be used for each eye. The lids should be washed from the nose toward the outer corner of the eye. If the eyes show a mattery secretion and the lids are swollen, a physician should be consulted at once. Infection of the eyes has often resulted in blindness.

The mouth. The baby's mouth should be cleaned once a day by the use of a swab, made by twisting a bit of absorbent

cotton on a wooden toothpick, wet in a two per cent solution of boric acid. After each feeding a teaspoonful of warm, sterile water may be given to wash the milk down. The old method of cleansing the mouth with a piece of gauze twisted over the finger frequently injured the delicate tissues. Except in emergency the finger should not be put inside the baby's mouth.

The scalp. For the first few weeks the baby's scalp should be washed at the time of the bath. If yellow scales form, rub warm olive oil or vaseline into the scalp at night, and in the morning wash it with warm water and pure castile soap, rinsing thoroughly. If the scales do not come off, repeat the operation as many times as necessary. Do not use a comb to remove the scales, as this will irritate the scalp and render the condition worse.

The nails. The baby's nails should be cleaned with a toothpick over which has been twisted a little absorbent cotton. The nails should be carefully cut with small scissors in order to prevent him from scratching himself.

The body. It is best to wash the baby's entire body with warm water and soap before placing him in the tub. The bath in the tub is for rinsing off the soap and for exercise. He should be turned over so that his chest will rest on the mother's forearm while his feet touch the bottom of the tub. Teach the baby to like the bath, and he will not be frightened. He should not stay in the water more than two or three minutes, and when lifted out should be wrapped in a soft, warm bath towel. He should be dried quickly by gently patting the skin with soft towels, not by wiping. Take special care to dry all the folds and creases; rub these with

sweet oil or lanolin, or powder them carefully. Powder, if used, should be lightly dusted on the neck, behind the ears, under the arms and knees, in the groin, and on the buttocks. Rub off all superfluous powder; if it gets wet and hardens, it will irritate the skin.

Dressing. The baby should always be dressed while lying on his back or on a bed or pillow. Pin the flannel band at the side with small safety pins; then put on the shirt and be careful that the draw string at the neck is not tied too tightly. Next put on the diaper snugly. The garter is placed inside the slip and both are put on at the same time. These two garments should be drawn on over the baby's feet. If the weather is cool, the baby should be wrapped in a flannel blanket.

Bran bath. If the baby's skin is sensitive or if he has heat rash, a bran bath

will prove beneficial. Prepare this by putting bran into a cheesecloth bag six inches square, and soaking this in the bath until the water is milky. Do not use soap with the bran bath, nor with an ordinary bath when the baby's skin is sensitive.

CHAPTER VIII

THE BABY'S CLOTHING

Suggestions for demonstrations. 1. Show samples of clothing for a baby. 2. Demonstrate how to dress a baby in hot weather. 3. Demonstrate how to dress a baby in cold weather.

Clothes. The clothing must always be roomy and loose and adapted to the season, climate, and temperature.

FIRST SET OF CLOTHES

Four flannel binders

Four knitted bands

Three shirts and three nightgowns

Three flannel gertrudes

Three dozen diapers

Four long white dresses

Flannel bands. These bands should be made of all-wool flannel, four inches wide and about twenty-eight inches long, that

is, long enough to reach twice around the baby's body. They should have no hems and should be fastened at the left side



BABY CLOTHES

with small safety pins. Bands must be adjusted with great care; they should not be drawn too tightly, but should be made so snug that they will neither slip down and bind the baby's legs nor slip up and interfere with the expansion of the chest.

Knitted bands. Knitted bands may be of wool and cotton or of silk and wool. Next to the smallest size is the most practical one to buy. It should fit snugly, should not wrinkle, and should not have rough seams.

Shirts. Baby shirts come in several sizes and weights. It is well to begin with the second size, as the first size is so soon outgrown. They should be high-necked, long-sleeved, and should open all the way down the front. Silk and wool is the best material because it is light in weight and wears well. The lightest weight should be worn in summer, a little heavier weight in the spring and fall, and a still heavier in the winter. There is a tendency in winter time to use shirts that are too heavy. The result is that the baby perspires too freely. This makes his clothing damp and renders him more liable to take cold. Babies living in overheated houses and wearing

clothing that is too warm soon become sensitive to cold and drafts and are less able to resist sickness.

Flannel gertrudes. The gertrudes should be made of all-wool flannel or of wool and cotton. They should open on the shoulders.

Dresses. The dresses should be simply made of soft material. They should be laundered without starch. Both the shirt and the dress should be loose around the baby's neck and arms, since any tightness or roughness in the clothing may irritate the skin.

Nightgowns. Nightgowns may be made of flannel, stockinet, cotton, or flannelette. The winter nightgowns should be long enough to allow the bottom to be closed by a draw string. This will make sure that the baby's feet are covered at all times even if he kicks off his bedclothes.

Diapers. Diapers should be made of bird's-eye linen, cotton, or stockinet. For

a young baby they should measure about eighteen or twenty inches square and be folded but once. Never use a folded inside diaper, as a wad of thick material between the legs is injurious. A small inside folded cloth five inches square may be used, or a quilted pad about ten inches square may be laid under the baby after the diaper is on. This pad will protect the skirts from urine. During the mother's waking hours the diaper should be changed as often as it is wet or soiled. In the night it should be changed when the baby is taken up for feeding or if he is restless.

All diapers should be washed each time after they become wet. The soap used in washing them should be carefully rinsed out, and they should be boiled thoroughly at least twice a week. A careless soaking and wringing through one or two waters is not an adequate cleansing. Care must be taken in selecting the soap to be used

in washing the diapers, since some soaps will cause an irritation of the skin, even when the clothing has been well rinsed.

Stockings. It is important to keep the baby's legs and feet warm. Stockings and diapers should meet. In cold weather the baby should wear stockings; in summer he will not require any covering for his feet.

Short clothes. The baby should be put into short clothes about the fifth month, for at that time he begins to show signs of wanting to use his legs and to kick. It is not wise, however, to make this change during very cold weather.

Clothing in summer. The greatest care should be taken to see that the baby is not dressed too warmly in summer. Too heavy clothing whether in summer or in winter will make him perspire too freely and render him more liable to colds and bowel troubles. The mother should feel of his body occasionally; if she finds it

constantly moist, the clothing is too warm. In summer only the thinnest undershirts should be worn, and warmer outer garments should be added as it grows cool toward night. Light-weight knitted or crocheted jackets are easily made.

Clothing in winter. Clothing should always be adapted to the season. If the baby is not dressed warmly enough, he will have cold hands and feet, and his legs and arms will be bluish. A baby must have fresh air, but his body must be kept warm. This is most important; unless this is done his vital force will be lessened and he will not gain as he should. When taken out he must be warmly dressed with a long woolen or wool-lined coat with a shoulder cape. In cold weather a silk cap with a lining of wool is best. Take care that the neck of the coat and the cap ribbons are not too tight. Leggings will be necessary after the baby is in short clothes.

CHAPTER IX

HABITS AND TRAINING

Suggestions for demonstrations. 1. Demonstrate how to protect a baby from flies and mosquitoes when sleeping. 2. Show how to support a baby over a chamber.

Do not forget that during infancy life's habits are being formed and that this period is of greater educational importance than any other of his life.

The normal baby is well and happy. Babies who are properly fed and kept clean, who have plenty of sleep and fresh air and are trained in regular habits, are usually well and good-natured. On the other hand, if babies are fussy and restless most of the time, there is something wrong. Patiently search for the cause of the trouble and see that it is removed.

Sleep. A newborn baby sleeps about nine tenths of the time. He should not be disturbed except for necessary care. After he has been made comfortable and fed he should be laid in his crib and trained to go to sleep without rocking and without a pacifier of any kind.

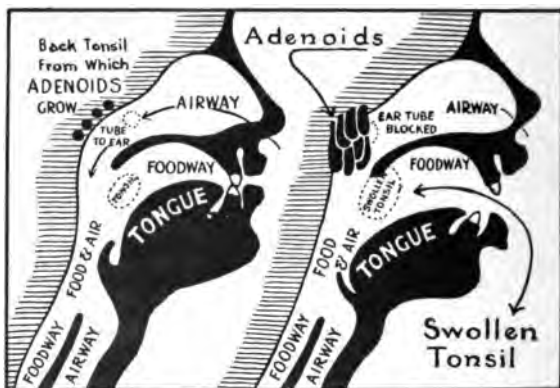
The daily amount of sleep required for different ages is approximately as follows:

First month	18 to 20 hours
Second to sixth month	16 to 18 hours
Sixth month	14 to 16 hours
One to two years	12 to 14 hours

During the first year a nap in the middle of the forenoon, and another in the afternoon, is desirable. The afternoon nap should not be so late as to interfere with the night's sleep.

A healthy baby sleeps with his mouth closed. Mouth breathing is caused by some obstruction in the air passages, usually enlarged tonsils or adenoids. Other

signs of the presence of adenoids may be restlessness at night, snoring during sleep, or frequent attacks of head colds. When any one of these symptoms is



NOSE AND THROAT PASSAGES

Left, normal ; right, abnormal

present the child should be placed under a physician's care at once; otherwise its normal growth and health may be seriously retarded.

The sleeping room should be dark, well ventilated, and quiet. The baby should

always be protected from drafts, but the air should be fresh and cool. After being fed he should be placed on his side, and after the next feeding, laid on the opposite side.

Sleeping out. After a baby is six weeks old he should take his naps out of doors when the weather permits. He should be protected from flies and mosquitoes and shielded from the sun, wind, and dust. Remove the shoes and loosen the clothing before placing him in his crib. If the weather is cool, his feet and body must be kept warm.

Bowel movement. The baby's first stools are of tarlike consistency, with little or no odor. After a day or two the stools change to a light yellow in color, are soft in consistency, and have little or no odor. During the first week the bowels move two or three times a day. As the child grows older, one or two movements a day will be sufficient.

The mother should begin to train the baby to use a chamber as early as the third month. He should be placed on a small chamber held between the mother's knees, his back being supported against her body. In order to form the habit of having the bowels move regularly this should be done at the same hour each day. If the bowels do not move, insert a soap or glycerine suppository into the rectum. This will help direct the baby's attention to the reason for his being placed on the vessel, and the suppository starts the bowels moving. This habit is soon established. The child should be placed on the chamber after the early morning feeding and again in the afternoon.

Bladder. Habits of regularity in emptying the bladder may be formed by placing the baby on the vessel every three or four hours during the day and the last thing at night.

Thumb sucking. The habit of thumb or finger sucking begins in early infancy and may continue until the child is six or eight years old if it is not broken. If persisted in, it may cause marked deformities of the jaws and teeth. When the thumb or finger is put into the mouth it should be gently but firmly removed. By this method the habit will be gradually overcome. It may be necessary to pin the sleeves to the side of the dress, so that the arms cannot be raised.

Pacifier. Never use a rubber nipple, sugar ball, or any other pacifier.

Kissing. Under no circumstances should anyone kiss a baby on the mouth. Common colds, tuberculosis, diphtheria, whooping cough, measles, and many other diseases are transmitted in this way. Remember that disease may be present in the secretions of the mouth and nose and on the lips.

Crying. A well baby never cries without cause. Normal crying is loud and forceful, and the mother will soon learn to distinguish it from the cry of pain, hunger, or discomfort. A baby has no other way of expressing his needs — therefore his cry should be heeded. When he cries the mother should see that he is made comfortable, that his hands and feet are warm, that his diaper is not wet, and that no pins are pricking him. Often merely a change of position is sufficient to quiet him. Do not take him up at the first cry; most babies like to be held and will often cry simply to be taken up.

Cry due to colic. The cry of colic is sharp and spasmodic. The baby will draw his legs up, and the muscles of the abdomen will be hard and tense.

Cry due to hunger. The normal cry of hunger is heard some time before the feeding is due, and is accompanied by the

sucking of the thumb or the fingers. If the baby is not getting sufficient nourishment, the cry of hunger is a continuous fretful sound and is heard soon after a feeding.

Cry due to temper. The cry of temper is loud and strong; the baby usually kicks, and his body stiffens. This is easily recognized, because when the baby gets what he wants he will stop at once. When a baby cries from temper let him cry it out. The struggle will not be long, because he will soon learn that this crying is useless.

Cry due to illness or fright. The cry of most forms of illness is low, moaning, and fretful. The cry of fright is sudden and loud. The child should be taken up, comforted, and put down again as soon as he is quieted. In all cases of persistent crying the doctor should be called if the mother does not succeed in her attempts at quieting.

Exercise. The young baby gets his exercise by crying (which expands his lungs), also by kicking and waving the arms. It is important that the clothing should not be so tight as to interfere with these natural movements.



BABY EXERCISING

When he is in short clothes, at regular times each day he should be placed on the floor, on a thick blanket, and allowed to roll and creep about at will.

Twice a day if possible, but always just before bedtime, the baby should be placed on a large bed in a warm room with all

his clothing removed, and should be encouraged to kick and play for ten or fifteen minutes. He may be played with at this time, but must not be permitted to become excited.

CHAPTER X

THE BABY'S TEETH

Suggestions for demonstrations. 1. Demonstrate the preparation of a baby's mouth wash.
2. Demonstrate the care of the baby's first teeth.
3. Demonstrate the care of the toothbrush and explain the necessity for such care.

The best way to secure sound, healthy teeth in a baby is for the mother during her girlhood to see that her own teeth are in good condition and to keep well and happy, because it is then that the foundations of health for life are established. The mother must take the best care of her teeth at all times and maintain her health in every possible way. A sickly mother usually means a sickly baby.

The first teeth of the child are called the milk teeth and are twenty in number.

In a normal baby the first tooth usually appears about the sixth month.

The teeth usually come as follows:

Two lower central incisors . . .	6 to 9 months
Four upper incisors . . .	8 to 12 months
Two lower lateral incisors } .	12 to 18 months
Four anterior molars . . .	
Four canines (the "eye" and "stomach" teeth)	18 to 24 months
Four posterior molars	24 to 30 months

Cleansing the teeth. As soon as the first tooth appears, it should be cleansed each day with a small piece of gauze or cotton saturated in a weak solution of bicarbonate of soda and water. A teaspoonful of water after each feeding or after taking fruit juice will help to cleanse the mouth.

Drooling. When the baby is about four months old the flow of saliva is increased. This is an indication that the salivary glands are developing, and not, as is commonly thought, a sign that the teeth are

trying to push their way through the gums, although this may be the case.



CHILD BRUSHING HIS TEETH

Teething. Babies nourished by healthy breast milk cut their teeth earlier than those who are bottle fed. When the teeth begin to come the gums are apt to be

red and swollen. Special care should be taken at this time to keep the mouth clean. It is a mistake to dread the teething period and to feel that the baby is sure to be sick. Sickness at this time usually attributed to teething is more apt to be due to faulty feeding or to some other condition, and the family physician should be consulted at once.

Diet. Good teeth in a baby depend largely on his diet. During the first few months of his life, in addition to milk he should be given fruit juice and meat juice (see Appendix B). As his teeth develop he should be given food that requires chewing; this is necessary to keep the teeth and muscles of the jaw strong and healthy.

Teeth and their care. By the time the child is two and a half years old the temporary teeth should be fully developed. These are replaced by the permanent teeth, which usually begin to appear about

the sixth year. Their condition will largely depend upon the care given to the first teeth; neglect of the temporary teeth is a frequent cause of decay in the permanent teeth.

After the teeth come they should be cleansed with a soft brush in the morning and after the evening meal. A good mouth wash consists of a two per cent boric acid solution or a weak solution of bicarbonate of soda and water (one-half teaspoonful to a glass of water).

Care of the toothbrush. After being used the toothbrush should be cleansed with soap and warm water, thoroughly rinsed, and completely dried. Each day it is well to place the brush in the sunshine.

CHAPTER XI

EMERGENCIES

Suggestions for demonstrations. 1. Describe the bath thermometer and illustrate its use with water at different temperatures. 2. Demonstrate the preparation of an enema and show the correct position of the body when taking one. 3. Show how to protect the baby from infection when the mother has a cold.

Babies should be protected from excessive excitement. The brain grows as much during the first year as it does during the entire remainder of life. As the baby's nervous system is easily upset, he should be kept free from disturbing influences.

Convulsions. Anything which upsets the baby's nervous system may interfere with the process of digestion. This, as

well as improper food, constipation, or some acute illness may be the cause of convulsions. When in a convulsion, the baby loses consciousness, the legs and arms stiffen, and the facial muscles begin to twitch. Send for a doctor at once. Meanwhile the baby should be placed in a tub of warm water. If a thermometer is not at hand, some adult should always test the temperature by placing her arm, up to the elbow, in the water. Great care should be taken that the water is not too hot, as many babies have been seriously burned in this way. The temperature of the water should be slowly raised to 108° F. by adding hot water. A cold compress should be placed on the child's head and frequently changed. When the convulsion ceases the child should be removed from the bath and wrapped in a warm blanket, and his face should be bathed with cold water. If

necessary, he may be kept in the bath about twenty minutes. If a child has convulsions and a tub is not available, he should be wrapped in a large bath towel which has been dipped in water at a temperature of 104° F., wrapped in a soft blanket, and the face and hands should be bathed in cold water.

Colic. Colic, or a pain in the bowels, is indicated by a sharp, spasmodic cry, a drawing up of the legs, and a contraction of the muscles of the face and abdomen. The sufferer should be given a little warm water to drink and should have a soft, hot flannel placed over the abdomen and around the feet, or he should be laid on his stomach across a hot-water bag which is protected by a cloth covering.



BATH THER-
MOMETER

Constipation. It is important that the mother who is nursing a baby should have a free movement of the bowels each day; if her bowels are kept open and her digestion is good, the baby will not, as a rule, be constipated. A little water given to the baby between feedings will help to prevent constipation. Fruit juices, such as prune and orange juice, should also be given. The most effective way of overcoming or preventing constipation is to develop the habit of having the bowels move at the same time each day. The baby should not be allowed to go more than twenty-four hours without a movement. Except in emergency, however, do not give the baby an enema or suppository or any medicine unless ordered to do so by a physician.

Enema. An enema of two to four ounces of warm water, to which has been added a little soapsuds and one or two

tablespoonfuls of warm olive oil, will usually cause a movement of the bowels.

Directions for giving an enema. Place the baby on his back with a folded towel under his buttocks. A soft rubber catheter is safer to use than the hard rubber nozzle provided for this purpose. Allow the water to run freely through the catheter before inserting, so as to prevent injecting cold water and air into the rectum. Lift the baby's feet with the left hand and with the right insert the oiled catheter gently into the rectum for two or three inches.

Diarrhea. A well baby usually has one or two movements a day. Frequent movements, or diarrhea, may be the beginning of a severe illness, and a physician should be consulted at once. This condition occurs more frequently with bottle-fed babies. If it occurs in a breast-fed baby, it is usually because the mother has not been careful about her diet or because the baby has

been given improper food. To relieve this condition, if a physician is not at hand, give one teaspoonful of castor oil and omit the feeding in order to let the baby's stomach rest.

Prevention of chafing. The skin of the baby is sensitive and may be easily irritated. For this reason the baby's diaper should be removed as soon as soiled and the skin cleansed with warm water. The folds of the skin should be thoroughly dried and dusted with a little talcum powder, or olive oil may be applied, before the clean diaper is put on.

Colds. Common colds are contagious and in infants often lead to serious illness. A mother with a cold, when nursing her baby, should tie a handkerchief loosely over her nose and mouth in order to protect the child from infection if she should cough or sneeze. Many children's diseases, such as whooping cough, measles, etc.,



PROTECTING THE BABY FROM HIS MOTHER'S COLD

are transmitted through the secretions of the nose and mouth. Any member of the family who has a cold should keep away from the children, and particularly from the baby.

Vaccination. Before the discovery of vaccine, smallpox was the most dreaded disease in the world and more prevalent than measles is to-day. A hundred years ago it was considered a disease of the children; to-day, by the simple and safe process of vaccination, it has been almost entirely eliminated, except in those localities where through prejudice or ignorance the children are not vaccinated. Therefore every baby should be vaccinated before he is six months old; this should be repeated at about six years of age, and later if there is a smallpox epidemic.

The best place for vaccination is on the left arm. If the leg be selected, as it is occasionally (especially with girls), the child should stay in bed during the reaction following vaccination.

The aftercare of a vaccinated child is important. A dressing of clean, sterile gauze should be placed over the point of

vaccination and held in place with strips of adhesive plaster. The dressing should be changed only by the physician or under his orders. If it sticks to the scab, it should not be pulled off; the cloth should be cut away around it and a small piece left adhering to the arm and a fresh dressing placed over this. Do not apply vaseline or any kind of ointment to the point of inoculation. Nothing must touch it but clean boiled water and sterile dressing handled by clean hands.

A vaccinated child should have a bath and a change of underwear daily, but it is important that the dressing over the vaccination should be kept clean and dry. The child should not be permitted to play in gardens, stables, or dusty streets until the arm has completely healed.

APPENDIX A

ORGANIZATION OF THE GIRLS' HEALTH LEAGUE CLASSES

I. PRELIMINARY MEETING

The mothers and teachers should be invited and urged to attend the meeting for the organization of a class. The success of this movement for the health of our girls and for the saving of our babies depends largely upon the interest and coöperation of the mothers and teachers.

The organizer should preside, and the school physician should be asked to explain the object of the league.

At this preliminary meeting membership cards should be distributed to those desiring to join the class. These are not to be signed until the girls have taken them home and secured the signatures of their parents or guardians. While everything possible should be done to make the club proposition attractive, no girl should be

urged to join against her will. An unwilling member is not a good member.

In order to secure careful personal supervision and free discussion, a class of not more than twelve is desirable, but as many as twenty-four may be directed by an experienced teacher.

The form of membership card is given below :

Girls' Health League Under the Auspices of the PUBLIC HEALTH DEPARTMENT OF THE MASSACHUSETTS STATE FEDERATION OF WOMEN'S CLUBS												
I desire to become a member of the Girls' Health League, ----- and promise to do my part towards making others well and happy.												
NAME-----												
ADDRESS-----												
DATE-----												
APPROVAL OF PARENT OR GUARDIAN-----												
Attendance at lectures 1 2 3 4 5 6 7 8 9 10 11 12 (Check each lecture attended)												

II. FIRST MEETING OF THE CLASS

1. The membership cards should be collected.
2. The members elect a president, a vice president, and a secretary. The organizer and instructor are to be honorary president and vice president, respectively.
3. Membership cards are to be given to the secretary for filing. At each succeeding meeting these are to be checked to show attendance.
4. A card like that reproduced below should be filled out and forwarded to the headquarters of the Girls' Health League.

Girls' Health League

Under the Auspices of the

**MASSACHUSETTS STATE FEDERATION OF
WOMEN'S CLUBS**

State..... Class Number

Town.....

Class Rank

Number of Members.....

Organizer..... Instructor.....

Address..... Address

Date of Organization

III. ORDER OF BUSINESS FOR THE MEETING

1. Calling meeting to order by the president.
2. Calling the roll by the secretary.
3. Reporting the illness of any member.
4. A short quiz on the last lesson.
5. A twenty minutes' talk by the instructor, followed by a half hour devoted to practical demonstrations on the subject of the lesson.

The following articles are suggested for use in the demonstrations :

Large-sized washable doll
 A complete set of baby clothing
 A bathtub
 Scales
 A pad for the scales
 Clothes basket for baby's bed
 Mattress
 Sheets
 Stork sheeting
 Mattress protector
 Blankets
 Spread
 Two bath towels
 Two face towels
 Two wash cloths
 Toilet articles
 Utensils for preparing the baby's food

The object of the demonstrations is to make the work of the league of practical value to the girls.

After attending three successive meetings of the class each member will be given a Girls' Health League button, which is reproduced in



the accompanying cut. The presentation of buttons signifies that the girls are members of the Girls' Health League. On receipt of the button each girl agrees to do some definite act each day to make others well and happy.

IV. FINISHING THE COURSE

At the completion of the course each girl will be given an oral examination and will be asked to write an essay on the care of a baby. The following subjects are suggested :

1. What do you mean by personal hygiene?
2. What do you mean by home sanitation?
3. Give three reasons why a mother should nurse her baby.
4. If a baby must be bottle fed, what is the best substitute for breast milk, and who should direct how the food be prepared?
5. If a baby is bottle fed, how would you care for its milk?
6. What can you do to help save the babies?



Certificate of Graduation **Girls' Health League**

Under the auspices of the
Massachusetts State Federation of Women's Clubs

This Certifies that

_____ has satisfactorily completed the course of study prescribed by the
Girls' Health League in _____

Olivia M. Loring
President of Massachusetts State
Federation of Women's Clubs

May Blais Dickinson R.R.
Founder of Girls' Health League

Allen H. Robinson, Jr. D.
Chairman Public Health Department

Date _____

The class average, together with one of the essays, should be sent to the headquarters of the league.

On receipt of the essays and the class records certificates will be presented to the graduates by the Public Health Department of the Massachusetts State Federation of Women's Clubs. The form of certificate is given above.

APPENDIX B

RECIPES

Limewater. To make limewater, add one teaspoonful of unslaked lime to one quart of cool, boiled water. Pour into a bottle and shake thoroughly. Let it stand twenty-four hours ; pour off the clear fluid at the top and strain. Keep in a cool place.

Barley water. Mix two teaspoonfuls of barley flour with a little cold water, then add one quart of water and boil twenty minutes in a double boiler. Strain through a very fine sieve and add enough boiled water to make one quart.

Rice water. Rice water is made in the same way as barley water, but only one teaspoonful of rice is used to one quart of water.

Oatmeal water. Mix two even tablespoonfuls of oatmeal with a little cold water ; add one quart of water and boil for at least one hour in a double boiler. Strain through a fine sieve and add enough boiled water to make one quart.

Beef juice. Select the third cut of the round lean beef, broil it slightly on both sides, cut in small pieces, and squeeze the juice from it with a potato ricer or a meat press. Add a pinch of salt, and before using warm it slightly by standing the cup containing the juice in a dish of hot water.

Whey. Warm one pint of fresh milk to about 110° F. Add one teaspoonful of essence of pepsin or a junket tablet and stir until it is well mixed. Pour into cups and let stand until it jellies. Then break up the curds with a fork and strain through a sieve. The liquid is called whey, and it is sometimes used when babies cannot digest cow's milk.

Two per cent boric acid solution. Put one teaspoonful of boric acid powder in a pint of boiling water and keep in a clean bottle.

Soap suppository. Take a piece of Ivory or castile soap and cut out a piece two inches long and about the size of a lead pencil. Narrow to a dull point at one end.



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